Environmental Strategies

EVIDENCE

Environmental
Strategies

2011 - 2014 Review Date - 2017

Environmental Strategies

Contents

Environmental Strategies

Introduction

Reducing alcohol-related harm in young people is a major priority across Europe. Perceived availability is commonly associated with adolescent alcohol use. Environmental strategies to prevent the misuse of alcohol among young people such as policies restricting access to alcohol have been shown to reduce underage drinking. Much alcohol use and associated harm in young people occurs in public drinking environments. These environments, including bars, nightclubs and their surrounding areas are associated with high levels of acute alcohol-related harms.

Legislation on alcohol-related harm and disorder typically focuses on environmental preventive measures, such as opening hours regulation, staff training, enforcing the refusal of service to intoxicated patrons, and the replacement of drinking glasses and bottles with plastic alternatives. Such approaches require input and support from stakeholders including police, local authority licensing staff and health professionals.

Environmental Strategies

Preloading

Limited existing research on pre-drinking suggests that it is associated with heavy drinking and harmful consequences. Recent research has indicated that differences in the price of alcohol while drinking at home as opposed to in drinking establishments may be encouraging people to 'pre-load' to a great extent before going out.

Hughes et al (2008) conducted a survey of 18-35 year olds in bars and nightclubs in England (n = 380) to explore differences in alcohol consumption and negative nightlife experiences between young people who drink prior to going out and those who do not drink until reaching bars and nightclubs. The results indicated that those who 'pre-loaded' reported significantly higher total alcohol consumption over a night out than those not drinking until reaching bars and nightclubs. Over a quarter (27%) of female and 15% of male alcohol consumption over a night out occurred prior to going out. Individuals who drank before going out were over four times more likely to report drinking >20 units on a usual night out and 2.5 times more likely to have been involved in a fight in the city's nightlife during the previous 12 months. Thus, it was suggested that interventions tackling drunkenness and alcohol-related violence in the night time economy (NTE) should expand beyond those targeted solely at nightlife environments, as disparities in pricing and policing of alcohol between on- and off-licensed premises may increase at-home drinking prior to nights out. This hypothesis is supported by research by Thombs et al (2009) who found that patrons who did not take advantage of drink specials reported consuming more drinks before bar entry than patrons who did participate in these promotions.

Wells et al (2009) conducted a literature search to examine pre-drinking. They outlined apparent motivations for pre-drinking which included: avoiding paying for high priced drinks at drinking establishments; achieving drunkenness and enhancing and extending the night out; and socialising with friends and reducing social anxiety or enhancing male group bonding before going out. The authors argued that policies focused upon reducing drinking in licensed premises may have the unintended consequence of displacing drinking to pre-drinking environments, possibly resulting in greater harms. Thus, it was recommended that effective policy and prevention for drinking in licensed premises requires a comprehensive approach that takes into account the entire drinking occasion (not just drinking that occurs in the licensed environment), as well as the 'determined drunkenness' goal of some young people.

Environmental Strategies

Off-premise/licence

Treno et al (2008) studied patterns of adolescent alcohol access by conducting a survey of 30 young people aged 14-16 in each of 50 post code areas selected to maximise variability in median household income and off-premise outlet densities. Results indicated a complex pattern of underage access to alcohol. For example, both actual use of and perceived ease of access to formal sources were positively associated with off-premise outlet density, and actual use of informal sources was negatively associated with outlet densities. The authors concluded that young people's drinking is affected by opportunities and constraints, and that as one form of access becomes constrained, young people appear to overcome restrictions by relying on other modes of access. Thus, interventions targeting formal alcohol access by young people may result in a shift to reliance on social sources, suggesting that this complex problem requires a multi-faceted intervention approach.

Huckle et al (2008) examined the relationship between physical, socio-economic and social environments and alcohol consumption and drunkenness among a general population sample of drinkers aged 12-17 years in New Zealand. They used data from environmental measures (e.g. alcohol outlet density) and a random telephone survey of respondents. Results indicated that alcohol outlet density and neighbourhood deprivation were associated with alcohol consumption among teenage drinkers. Supply by family, friends and others also predicted quantities consumed among underage drinkers and both social supply and self-reported purchase were associated with frequency of drinking and drunkenness.

Kavanagh et al (2011) conducted a multi-level study of Australian adults aged 18-75 years (n = 2,334) to assess the association between access to off-premises alcohol outlets and harmful alcohol consumption. Alcohol outlet density was defined as the number of outlets within a 1-km road network of respondents' homes and proximity was the shortest road network distance to the closest outlet from their home. Findings indicated that density of alcohol outlets was associated with increased risk of harmful alcohol consumption. Thus, the number of off-premises alcohol outlets in a local area was shown to be associated with the level of harmful alcohol consumption in that area. As such, it was suggested that reducing the number of off-premises alcohol outlets could reduce levels of harmful alcohol consumption.

Environmental Strategies

Off-premise/licence (continued)

Kuntsche et al (2008) examined data from a Swiss national representative sample of adolescents in 8th and 9th grade (n = 6,183) to assess characteristics associated with alcohol consumption and availability. Results indicated that perceived availability and drinking volume appeared to be shaped by the adolescents' social and physical environments. That is, social environment characteristics, such as having peers and siblings who drink, going out without parental knowledge of the adolescents' whereabouts, drinking in public settings and the density of on-premises but not off-premises alcohol outlets, were related to perceived availability. Adolescent alcohol use increased with the permissiveness of social environment characteristics and with increasing perceived availability. It was concluded that young people who have a variety of opportunities to obtain alcohol might perceive underage drinking to be common and socially endorsed, and thus prevention attempts should consider the social acceptance of drinking and the physical availability of alcohol in the community.

Licensed Premises

Alcohol outlets can be conceptualised as a place where "drinkers exchange economic and social goods...and incidentally form social groups for drinking that can promote a number of different problem behaviours" (Gruenewald, 2007). Alcohol consumption in bars and clubs is common and heavy drinking often occurs in these settings.

Licensed premises offer a valuable point of intervention to reduce alcohol-related harm. Although strategies exist to minimise alcohol-related harms associated with such establishments, these are associated with a disproportionate level of harm. In particular, problems associated with the night-time economies (NTE) cause substantial community concern and constitute a substantial drain on police, community and health resources.

Chinman et al (2011) hypothesised that gaining more knowledge and information of how off-premises outlets (e.g. off-licenses) and on-premises outlets (e.g., bars and restaurants) are alike and different could help community-based organisations better tailor, plan, and implement their environmental strategies. They conducted a survey among managers or supervisors of off- and on-licence premises (n = 366). Results indicated that while off- and on-premises outlets did have many similarities, off-premises outlets appeared to engage in more practices designed to prevent sales of alcohol to under age young people than on-premises outlets. This information was said to offer options for increasing and tailoring environmental prevention efforts to specific settings.

In the literature, it is debated whether intervention delivery should be targeted at those premises generating the greatest levels of harm or all premises in a NTE. Reasons for premises-specific interventions include the fact that premises-specific risk factors for disorder can be easily identified and therefore managed, and also that legislation has made managers accountable for managing risk in their premises (UK 2003 Licensing Act). Moore et al (2011) found that features of premises that promote intoxication are associated with violence, suggesting that targeting resources at risky premises will likely address the two concerns, both excessive intoxication and assault-related injury.

Special Interest Article - Clapp et al (2009)

Clapp et al (2009) examined the relationship among person-level characteristics, bar-level environmental characteristics and breath alcohol concentration (BrAC) by collecting observational data (through pseudo-patrons), survey data, and estimated BrAC from patrons randomly selected from bars (n = 839). The survey design was said to have ecological validity, in that it reflected the "real world" better than laboratory or retrospective survey based research.

Key results were as follows.

At the bar level, over-service to pseudo-patrons was described as a 'constant', suggesting the need for training for bar staff. Two environmental characteristics were associated with BrAC change from entrance to exit of the bar - the presence of dancing (protective factor) and temporary bars (risk factor). It was suggested that encouraging bars with music to offer dancing might be a fairly easy environmental intervention to implement, as would discouraging temporary point of sale bars.

At the person level, nearly three-quarters of participants reported drinking before attending the bar. On average, those who drank before attending the bar had BrACs at approximately half the legal limit. Pre-partying, intent to get drunk and past two-week history of heavy episodic drinking were predictive of BrAC. BrAC change from entrance to exit of the bar was predicted by gender (male), drinking intentions, (planning to continue to drink after leaving the bar), and time in the bar. It was further suggested that interventions aimed at shifting such motivations might include increasing the perception of risk for problems (i.e., driving under the influence, DUI) using media campaigns or employing brief interventions in the field.

Study limitations included:

(1)   Pre-bar drinking environments being measured using self-reports;
(2)   The researchers being unable to capture multiple pre-bar drinking environments across one evening or establish a detailed sequence of drinking behaviour in multiple environments, and
(3)   The lack of follow up information, e,g. being unable to track respondents to determine whether the drinking episode was linked to any subsequent alcohol-related problems (e.g., DUI, illness, regretted sex, etc.).

It was concluded that as drinking behaviour within a night-time single episode among bar patrons appears to occur in multiple contexts with numerous risk and protective factors, the combination of manipulating person and environment factors may result in effective prevention interventions.

Environmental Strategies

Licensed Premises (continued)

Hawkins et al (2009) conducted an Australian survey determining the level of support by licensees, police and the general public (n = 108 licensees of premises licensed to sell alcohol; 132 police officers; 200 members of the public) for interventions to reduce alcohol-related harm associated within licensed premises. Perceptions were linked to the role of the individual in relation to each intervention, so while police officers and members of the public agreed about strategies for reducing alcohol-related harm at licensed premises, licensees were less likely to take responsibility for reducing alcohol-related harm resulting from drinking at their premises.

Recently, there has been increased concern about the use of club drugs, (e.g., cocaine, amphetamine, ecstasy) in nightclubs (Miller, 2009). Two studies examined whether multi-component community-based interventions can have a significant impact on over-serving of alcohol and detection of drug use when training and house policies are combined with effective law enforcement.

Warpenius et al (2010) assessed the effects of a Finnish alcohol prevention programme (Responsible Beverage Service) aimed at reducing the serving of alcoholic beverages to intoxicated clients on licensed premises. The prevention programme was community-based and combined law enforcement, responsible beverage service training, information campaigns and policy initiatives in one Finnish town. The evaluation consisted of a controlled pre and post-intervention study design involving the intervention town and control towns. A male actor pretended to be intoxicated while attempting to buy beer at licensed premises. A researcher observed every visit and documented the results. Results indicated that refusals to serve alcohol increased significantly in the intervention but not control area.

Miller et al (2011) discussed how most communities struggle to find interventions that are effective, with most interventions being based on little or no empirical evidence. They reported on the impact of the Dealing with Alcohol-Related Problems in the Night-time Economy project (DANTE) intervention on emergency department attendances in Australia.   However, the results indicated that the community interventions were not associated with reduced alcohol-related attendances. The findings raised questions about whether targeting the night-time economy is effective and whether interventions should instead be targeted at reducing whole-of-community alcohol consumption.

Environmental Strategies

Special Interest Article - Clubs Against Drugs

The "Clubs against Drugs" program is a community-based multi-component intervention targeting licensed premises in Stockholm, Sweden. The program is based on a systems approach to prevention (Holder, 1998) with the aim at reducing drug use both among guest and staff at licensed premises. Components of the program include community mobilization, policy work, increased enforcement, drug-training, changes in the physical environment at licensed premises, and media advocacy and public relations work. An important focus of the Clubs against Drugs prevention program is targeting staff to reduce the overall drug use at licensed premises by using a comprehensive drug policy approach. This included development of written policies, education to staff, training for managers, drug-testing, and rehabilitation. For example, the drug policy document stated for example that drug use was not accepted among staff and guests, and that obviously drug-intoxicated guests should not be admitted into licensed premises. Doormen were trained in recognising signs of drug use impairment in order to stop drug use-impaired patrons entering the premises.

Gripenberg et al (2007) evaluated the effects of Clubs against Drugs by examining the frequency with which doormen at 28 nightclubs intervened in cases of obviously drug use-impaired patrons at baseline and follow up. Two male actors appeared obviously drug use-impaired while attempting to enter nightclubs (40 entry attempts were made in 2003 and 48 in 2004). Results indicated that there was an increase in attempts from 2003 – 2004 (27% versus 8%), although it was noted that it remained the case that doormen did not intervene in the majority of cases. Limitations of the study were the lack of a control group and problems with identifying the training status for the individual doormen.

Gripenberg et al (2011a) evaluated the long term effects of Clubs Against Drugs by conducting a pre and post intervention study. To evaluate the initiative, the frequency of doormen intervention towards obviously drug-intoxicated guests at licensed premises was measured. Professional male actors were trained to act impaired by cocaine/amphetamines while trying to enter licensed premises with doormen. An expert panel standardised the scene of drug intoxication. Each attempt was monitored by two male observers. Results indicated a significantly higher amount of intervention by doormen at follow up than at baseline. Thus, it was concluded that the 'Clubs against Drugs' community-based intervention programme appears to increase the frequency and effectiveness of club doormen's interventions regarding obviously drug-intoxicated guests.

Environmental Strategies

Special Interest Article - Clubs Against Drugs

Gripenberg et al (2011b) conducted research examining self-reported drug use among staff at licensed premises, types of drugs used, attitudes towards drugs, and observed drug use among guests. The study was carried out within the framework of the "Clubs against Drugs" program. The policy work component of the intervention focused the most on preventing club drug use among staff. In 2007, more than 150 owners and managers had been policy-trained and over 400 doormen had passed the two-day drug-training course. Staff (n = 466 in 2001 and 677 in 2007/2008) completed cross-sectional surveys.

Results indicated that the highest rates of drug use were reported by younger staff (up to the age of 29). In 2007/08, staff reported significantly lower rates of drug use than staff in 2001. The authors concluded that the "Clubs against Drugs" program may have contributed to this result, as the intervention program was extensive and there were no competing activities with the targeted licensed premises during the intervention period.

Overall, staff reported restrictive attitudes towards drugs. However, drug-using staff were shown to observe more drug use among guests, have a more liberal attitude towards drug use, and were less likely to intervene than non drug-using staff. The data suggest that in order to be more effective in reducing drug use among guests at licensed premises, drug use among staff should also be targeted, with staff at licensed premises representing an important target population in club drug prevention programs. The authors also reported that the results indicated the need for prevention programs within other settings other than schools.

Limitations of the study included the use of a non-randomised cross-sectional design, the absence of a control group, and the possibility that the reported lower rates of drug use at licensed premises could be explained by displacement of problems (e.g. staff that use drugs choosing not to work at licensed premises involved in the drug prevention work

Environmental Strategies

Licensed Premises (continued)

Millard et al (2008) reports on evaluation activities which were undertaken to evaluate the impact of a partnership among agencies and organisations providing services in Glasgow city centre to reduce alcohol related disorder as part of a two year pilot scheme. For such purposes, existing work was reconceptualised in relation to a model of community prevention of alcohol problems through policy change which contained five strands: community engagement; safer licensed premises; environmental improvements; enhancements to transport systems; and active management of the spatial density of alcohol outlets. The two year pilot scheme was said to not be long enough to see the longer-term changes of the interventions, with the need for better evidence of the effect of the interventions being highlighted. However, the use of the Holder philosophy in Glasgow as said to be influential in providing a rationale for the community partners to work together.

Reviews

Hughes et al (2011) conducted a systematic literature review to identity environmental factors in drinking establishments associated with increased alcohol consumption and associated harm. The review revealed 34 studies implemented in 9 countries. Throughout the studies, a wide range of physical, staffing and social factors had been associated with higher levels of alcohol use and related harm in drinking environments. Factors that appeared particularly important included a permissive environment, cheap alcohol availability, poor cleanliness, crowding, loud music, a focus on dancing and poor staff practice. However, findings were not always consistent across studies. The authors also highlighted limitations with the findings: most studies had been implemented in non-European countries and so there is currently a scarcity of knowledge on the relevance and impacts of such factors in modern European settings; many had collected data more than a decade prior to the review; and the majority had used observational research techniques.

Anderson et al (2009) reviewed the effectiveness and cost-effectiveness of policies and programmes to reduce alcohol related harm. Policies regulating the environment in which alcohol is marketed (particularly its price and availability) were deemed effective in reducing alcohol-related harm, as was enforced legislative measures to reduce drink-driving and individually directed interventions to already at-risk drinkers. Making alcohol more expensive and less available, and banning alcohol advertising were described as highly cost-effective strategies to reduce harm.

Bolier et al (2011) conducted a review examining the evidence regarding the effectiveness of interventions aimed at the prevention of harmful alcohol and drug use in nightlife settings. The review of 17 experimental studies indicated that preventive substance abuse interventions in nightlife settings can effectively reduce high-risk alcohol consumption, alcohol-related injury, violent crimes, access to alcohol by underage youth, and alcohol service to intoxicated people. However, the effectiveness of multi-faceted approaches was highlighted, as was the need for more research examining the (cost-) effectiveness of interventions.

Environmental Strategies

Reviews (continued)

Jones et al (2011) conducted a systematic review to identify effective approaches of reducing harm in drinking environments. They highlighted that the findings of the review were limited by the methodological shortcomings of the included studies. However, three studies indicated that multicomponent programmes combining community mobilisation, responsible beverage server training, house policies and stricter enforcement of licensing laws may be effective in reducing assaults, traffic crashes, and underage sales depending on the focus of the intervention. The effectiveness of other intervention approaches was limited. They highlighted the need for future studies of interventions in drinking environments to focus on using appropriate and robust study designs.

Brennan et al (2011) conducted a systematic review of rigorous evaluation studies into the effectiveness of interventions in and around licensed premises that aimed to reduce severe intoxication and disorder. Fifteen studies were identified which used either intoxication, disorder or both as outcomes measures. Interventions included responsible beverage service training, server violence prevention training, enhanced enforcement of licensing regulation, multi-level interventions, licensee accords, and a risk-focused consultation. However, intervention effects varied, even across studies using similar interventions. It was concluded that server training courses that are designed to reduce disorder have some potential, although there is a lack of evidence to support their use to reduce intoxication.

Middleton et al (2010) synthesised scientific evidence on the effectiveness of preventing excessive alcohol consumption and related harms through laws and policies maintaining or reducing the days when alcoholic beverages may be sold. The evidence from these studies indicated that increasing days of sale leads to increases in excessive alcohol consumption and alcohol-related harms and that reducing the number of days that alcoholic beverages are sold generally decreases alcohol-related harms.

Violence

Much research has investigated the link between alcohol consumption and alcohol related harm, particularly in the form of violence. Too et al (2011) conducted research on injuries and found that the significant majority of respondents taking part in an Australian telephone survey believed that injury incidents occur in alcohol environments, that 18- to 24-year-olds were the most likely to be intentionally injured, and that responsibility for preventing injuries was placed on proprietors of licensed premises, schools, and parents and family of the victim for alcohol, school, and home environments, respectively.

Environmental Strategies

Violence (continued)

Research has also indicated the link between volume of outlets and violence. For example, Livingston (2008) conducted an Australian study examining the characteristics of regions in which changes in outlet density are most strongly associated with changes in violence rates. Nine years of data measuring alcohol outlet density (using liquor licensing records) and alcohol-related violence (using police recorded night-time assaults) were studied. Findings indicated that changes in the number of alcohol outlets in a community were linked to changes in the amount of violence the community experienced. This relationship varied by area, with off-licences consistently associated with violence in suburban areas and general (hotel) and on-premise (nightclubs, restaurants, and bars) licenses associated with violence in inner-city and inner-suburban areas. Liang and Chikritzhs (2011) examined the effect of outlet numbers and alcohol sales on the risk of assault in Western Australia using data including police-reported assault offences. Findings indicated that: average alcohol sales volume per off-site outlet was significantly associated with all measures of assault; numbers of on-site outlets significantly predicted violence with the exception of assaults occurring at residential premises; and alcohol sales from off-site outlets predicted violence occurring at on-site outlets.

Moore and his colleagues have conducted Welsh studies investigating the link between alcohol and violence. Moore and Foreman-Peck (2009) conducted a cross-sectional street survey (n = 565) in an area characterised by a high density of licensed premises to assess whether perpetrators of violence are also more likely to be victims. Results indicated that this was the case; and that alcohol consumption and the frequency that respondents visited the NTE predicted victimisation. It was concluded that interventions that either reduce the impact of drunken behaviour or reduce excessive alcohol consumption will reduce alcohol related harm. Moore et al (2011) assessed associations between measures of premises-level alcohol-related harm and risk factors for harm. They undertook an environmental survey of the drinking context of 32 licensed premises with a history of on-premises violent assault. Results indicated that levels of surveyor-rated intoxication were associated with alcometer breath alcohol levels. Analyses further suggested that premises with the highest levels of violence also had customers whose entry-exit change in intoxication was greatest, were open for longer hours, had alcohol promotions and had visible security staff present. It was concluded that relatively low-cost observational survey methods can be used to identify high-risk premises, and can be used as outcomes for premises-level interventions.

Environmental Strategies

Special Interest Articles – Graham et al: The Canadian Safer Bars Programme and related research

In 2004, Graham and colleagues reported on the effect of the Canadian Safer bars programme, an intervention to reduce physical aggression in bars. As part of the intervention, owners and managers completed a risk assessment workbook to identify ways of reducing environmental risks. Staff and owners and managers (n = 373) attended a 3 - hour training session focused on preventing escalation of aggression, working as a team and resolving problem situations safely.

The research involved pre and post-intervention observations (n = 734) conducted by trained observers on Friday and Saturday evenings between midnight and 2 a.m. in 18 large capacity randomly assigned intervention bars and clubs and 12 control bars. Results indicated a significant effect of the intervention in reducing severe aggression (e.g. punching, kicking) and moderate physical aggression (e.g. shoving, grappling). Results also indicated that higher post-intervention aggression was associated with higher turnover in the intervention bars. The results were seen to indicate the potential for a stand-alone relatively brief intervention to reduce severe and moderate physical aggression in bars.

Graham et al (2011a) used narrative descriptions and data on incidents of aggression (n = 1,057) collected in the Safer Bars evaluation to examine the social context of barroom aggression. Specifically, they aimed to identify common locations ('hotspots') for aggression in bars and examine the association of hotspots with aggression severity and environmental characteristics. Findings indicated that the most common location for aggression was the dance floor or near the dance floor, followed by near the serving bar, and at tables; and that hotspots were predicted mainly by bar-level characteristics. For example, dance floor aggression was associated with crowded bars, a high proportion of female and young patrons, sexual activity, security staff present, and better monitoring and coordination by staff. The variation in results being linked to each aggression location and their associated environments were said to have different implications for staff training, premises design, policy and prevention.

Environmental Strategies

Special Interest Articles – Graham et al: The Canadian Safer Bars Programme and related research (continued)

Graham et al (2011b) also used data from the Safer Bars evaluation to identify behavioural indicators of apparent motives for aggression in high-risk licensed premises. The rationale was that knowledge of behavioural indicators of motives can be used to enhance staff hiring and training practices, reduce environmental triggers for aggression, and develop policies to reduce motivation for aggression.

They used the 4 types of motives for aggressive or coercive acts outlined in the Theory of Coercive Actions to suggest prevention strategies:

1) Compliance-motivated aggression generally took the form of unwanted social overtures, third party intervention to stop conflicts or staff rule enforcement. Prevention strategies included keeping the aggressor's focus on compliance to avoid provoking grievance and identifying motives likely to escalate aggression.

2) Grievance motives were often linked to perceived wrongdoing, with prevention needing to focus on eliminating sources of grievances and adopting policies/practices to resolve grievances peacefully.

3) Social identity motives were commonplace in many drinking establishments, especially among male patrons and staff. Suggested prevention involved reducing identity cues in the environment, hiring staff who do not have identity concerns, and training staff to avoid provoking identity concerns.

4) Aggression motivated by fun and excitement often involved low-level aggression where escalation can be prevented by avoiding grievances and attacks on identity.

Environmental Strategies

Violence (continued)

Rowe et al conducted Australian research using police data to investigate the link between alcohol and violence. In 2010, they undertook descriptive analysis to examine the association between drinking establishments and incidents of crime. Analysis was undertaken of intoxicated people who had last consumed alcohol in alcohol establishments (841 bars, 551 licensed social clubs, 11 nightclubs, and 18 other locations) preceding their involvement in police-recorded incidents of violence, disorder, or motor vehicle crashes. The findings indicated that among these individuals, the risk of being recorded as having last consumed alcohol in a bar or nightclub before the incident was at least twice that of licensed social clubs and other establishments. Thus, it was concluded that harm-reduction strategies addressing the specific risks posed by bars, nightclubs, and individual high-risk establishments may help to reduce alcohol-related crime associated with alcohol establishments. In 2011, they used recorded police data to examine the prevalence and characteristics of alcohol consumption among people involved in violence and disorder incidents. Results indicated that late Saturday evening was the peak time for alcohol involvement, and that prior drinking in private residences and licensed premises was associated with violence and disorder incidents (respectively). The prevalence of alcohol consumption rose with increased geographic remoteness, with it being suggested that geographic variability in the prevalence and characteristics of alcohol-related crime suggests a need for locally targeted, yet evidence-based, interventions to reduce such harm. Thus, the work by Rowe and colleagues further indicates the need to target work towards individual areas and establishments.

Environmental Strategies

Special Interest Article - Forsyth (2008)

Forsyth (2008) examined the impact of a glassware ban policy on disorder-related harm within licensed premises (nightclubs) in Glasgow and how this action was viewed by their patrons.

In February 2006, Glasgow City Council introduced a bye-law banning glassware from all venues holding an Entertainment Licence within the city's centre. In practice, the policy only affected any city centre premises serving alcohol after midnight (i.e. nightclubs). This bye law formed part of a larger intervention aimed at reducing violence in Glasgow's NTE which included restrictions on alcohol promotions, improved transport services (e.g. establishing taxi-marshalled 'nite-zones'), the encouragement of safer premises schemes (e.g. the Best Bar None awards) and social marketing designed to encourage sensible drinking.

The research involved two stages: 1) observations of a sample of eight nightclubs (which were selected in consultation with Strathclyde Police to represent the range of call-outs received), where visits were made between 12am - 3am on Friday and Saturday evenings; and 2) in-depth face-to-face interviews with 32 patrons of Glasgow's nightclubs.

Results indicated that exemptions to the glass ban (e.g. special 'safety' glass and exceptions whereby champagne or wine could still be sold in ordinary glass) allowed opportunities for potentially harmful glassware to remain in circulation. Therefore, it was recommended that future polices involving the removal of dangerous glassware would benefit from a rigorous monitoring system to ensure compliance, or that a 100% plastic policy would have been more effective.

However, despite this, the authors felt strongly that the policy could be successfully extended to nightclubs elsewhere, as patrons seemed quick to accept the removal of glassware from nightclubs elsewhere, and the severity of injuries caused by drinking vessels in nightclubs can be greatly reduced by a 100% glass-free environment. One negative consequence of the glass-free policy was plastic drinking vessels being discarded carelessly, which had implications for littering and floor slipperiness, consequently causing a management issue which needs to be addressed.

The author concluded that the replacement of glass with plastic drinking vessels in licensed premises, in particular entertainment and dance venues, is likely to bring substantial public safety rewards.

Environmental Strategies

Interventions with students

Potentially effective environmental strategies have been recommended to reduce heavy alcohol use among college students. Jamison and Myers (2008) undertook a self completion survey with students in London (n = 178) and found that the frequency of drinking and the drinking behaviour of friends significantly predicted intention to drink and binge drinking, respectively. Binge drinkers were influenced by peers and social-situational factors. Drinking more when alcohol is at a 'special offer' price, drinking in a group, alcohol availability and the influence of campus encouraged alcohol consumption. Thus, it was concluded that interventions seeking to reduce excessive drinking should target the role of peers and the university environment in which drinking occurs, and also that developing strategies that address specific practices such as 'alcohol promotion' and alcohol availability may be more beneficial than those focusing on behavioural change.

Special Interest Article - Saltz et al (2010)

Saltz et al (2010) reported on the Safer California Universities study to determine whether environmental prevention strategies targeting off-campus settings would reduce the likelihood and incidence of student intoxication at those settings. The Safer California Universities study involved 14 large public universities (7 of which were randomly assigned to the Safer intervention). The objective of the intervention was to combine elements of population-level alcohol control based on the general principles of deterrence and reduced availability of alcohol in order to achieve a measurable reduction in risky drinking and subsequent harm.

The intervention consisted of a set of alcohol control measures coupled with heavy publicity to give visibility to those enforcement activities. Specifically, the intervention combined (1) roadside Driving Under the Influence (DUI) checks; (2) police compliance check operations using underage decoys to enforce laws prohibiting sales to minors; and (3) designated "party patrols" that enforced laws regarding provision of alcohol to minors or disturbing the peace. Alongside this, six different channels of communication (e.g., website; brochure; e-mails; newspaper pieces) were used to publicise the intervention. It should be noted that intervention campuses differed in their level of implementation. The authors indicated that having a fixed deadline (first day of college) for the intervention to begin was a key advantage for accelerating implementation and maintaining focus.

Special Interest Article - Saltz et al (2010) (continued)

Very specific direction was provided to liaison members in the colleges for planning stages through to implementation.

To evaluate the intervention, random cross-sectional samples of undergraduates (~500−1,000 per campus per year) completed online surveys in four consecutive fall semesters (2003−2006). Findings indicated that intervention universities compared with control demonstrated significant reductions in the incidence and likelihood of intoxication at off-campus parties and bars/restaurants; a lower likelihood of intoxication the last time students drank at an off-campus party, a bar or restaurant, or any setting; no increase in intoxication (e.g., displacement) appeared in other settings, indicating that the more rigorous alcohol control measures did not drive college student drinking to other settings; and stronger intervention effects were achieved at universities with the highest level of implementation.

The authors highlighted the importance of the implementation of the intervention in achieving these positive results. In this intervention, campus prevention specialists aided the implementation process, due to their training, experience, and skill in mobilising both university and community departments and stakeholders. They provided many suggestions for overcoming potential and actual obstacles.

Environmental Strategies

Interventions with students (continued)

Research has indicated that alcohol prices are inversely related to alcohol consumption and alcohol-related problems, conversely that drink specials are linked to levels of intoxication. O'Mara et al (2009) collected survey data as well as breath alcohol concentration (BrAC) readings from 804 patrons exiting 7 on-premise college bars. Results indicated that a 10 - cent increase in cost per gram of ethanol at on-premise establishments was associated with a 30% reduction in the risk of exiting an establishment intoxicated. Thus, increases in alcohol prices were accompanied by less alcohol consumption. These findings suggest that stricter regulation of the drink discounting practices of on-premise drinking establishments would be an effective strategy for reducing the intoxication levels of exiting patrons. In a similar vein, Thombs et al (2008) collected data from exiting patrons (N=291) in a campus community via sidewalk interviews and breath tests and found that taking advantage of a drink special was associated with a four-fold increase in risk of achieving a BrAC >or= 80 mg/dl. These findings were described as the first to document that the drink discounting practices of college bars can be linked to higher intoxication levels among exiting patrons. Thombs et al (2009) used survey data and BrAC readings from patrons (n = 383) exiting college bars and found gender differences in patron drinking practices. Women were more likely to take advantage of drink specials, whereas men reported greater alcohol expenditures, consumed more drinks, and drank for longer periods of time.

Wood et al (2009) described the environmental management (EM) method which is applied in U.S. college campuses to target alcohol problems. This method features several key strategies, including limiting alcohol availability, restricting alcohol marketing and promotion, and developing and enforcing new policies to combat alcohol-impaired driving and to restrict the times, places, and circumstances in which alcohol can be purchased and consumed. The authors evaluated Common Ground, a media campaign-supported prevention programme featuring increased enforcement, decreased alcohol access, and other environmental management initiatives targeting college student drinking. To evaluate the initiative, telephone surveys were conducted for 4 consecutive years at the intervention campus and 3 years at a comparison campus. Targeted outcomes included perceptions of enforcement and alcohol availability, alcohol use, and alcohol-impaired driving. Results indicated that there was a significant increase in students' awareness of formal alcohol-control efforts, perceived likelihood of enforcement, and perceptions of responsible beverage service while decreasing perceptions of student misbehaviour at off-campus parties at intervention campuses. Data also indicated substantial decreases in complaints to local police regarding student disturbances in the community over the course of the initiative. In contrast however, there was no intervention effect on students' self-reported alcohol use or alcohol-impaired driving. This finding was said to point to the potential importance of sobriety checkpoints as an important component of EM approaches in college populations. As Toomey et al. (2007) concluded, although there is evidence supporting the utility of multiple-component EM approaches in college populations, currently it is not known which particular combination of approaches will yield optimal outcomes. Study limitations noted included the study design precluding causal inferences about intervention effects, with most college campuses being actively engaged in multiple preventive intervention efforts; and a modest telephone survey response rate (averaged 38%).

Environmental Strategies

Implications for Practice (continued)

Interventions require a multi-level input

Given the challenges involved in undertaking effective environmental interventions, multi-level input from a range of stakeholders is required. In particular, buy in and responsibility is required from licensees.

Interventions should focus on the whole drinking experience

Research has implied the harmful impact of 'preloading' and the possible impact of policies in licensed premises encouraging patrons to consume alcohol at home before going out (i.e. displacement) thus indicating the need for both prevention and policy to focus on the whole drinking experience. In particular, females have been shown to be more likely to preload and also take advantage of drink specials, thus indicating the need for prevention interventions to focus on these areas for that target group.

There is a need for multi-faceted interventions

The issue of alcohol availability is complex. Research has indicated that as availability is restricted by means of formal sources, individuals are likely to turn to informal sources thus highlighting the need for multi-faceted interventions, again focusing on the whole drinking experience.

Interventions should be tailored and targeted to high risk premises

Interventions should be targeted to high risk premises, and tailored to the type and location of premises to achieve maximum impact. For example, research has shown bars and nightclubs to be higher risk than other establishments (e.g. social clubs). In addition, different interventions should be targeted at on and off sales premises as some evidence has indicated that off-sales have more practices designed to reduce underage drinking. Interventions should also be ideally locally targeted as research has shown there to be geographic variability in alcohol related harm.

Consider risk and protective factors

Research has shown there to be a range of risk and protective factors associated with alcohol related harm (including violence) that should be taken into account when planning any environmental strategies.

- Risk factors: cheap alcohol availability; crowding; loud music; temporary bars; poor staff practice, e.g. staff lacking knowledge of accurate measures; being male; being an on-sales premises; having a permissive environment; lack of food and soft drinks; poor cleanliness; premises being open for longer hours; alcohol promotions; and preloading.

- Protective factors: increasing perception of risks for problems; training for staff (e.g. responsible beverage server training); policies encouraging the stricter enforcement of licensing laws; multi-level interventions; removal of glassware; reduced availability of alcohol; and increasing alcohol prices and having less drink specials.

Environmental Strategies

Implications for Practice (continued)

Consider limitations with research

Reviews of studies into environmental factors and alcohol related harm have indicated that results should be interpreted with caution for a number of reasons including that: findings are not consistent across studies; much research has been implemented in non-European countries; and there is a reliance on observational research techniques. Thus, there is a need for more intervention research to be undertaken in drinking environments. This further highlights the need to undertake preparatory work and research before implementing an intervention to ensure it is relevant to the venue and target group.

Link to other Core Elements

Community Approaches

Education

Training

Social Marketing

Harm Reduction - Alcohol